



IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Bill Northey, Secretary of Agriculture

January 31, 2014

Governor Terry E. Branstad
State Capitol
LOCAL

Dear Governor Branstad:

The Watershed Improvement Review Board is pleased to provide this annual report. This report is required by Iowa Code Section 466A.4. A copy of this report has also been submitted to the Legislature.

The Watershed Improvement Board is an independent, self-governing body which awards grants for water quality improvement in the state. Eligible applicants include soil and water conservation districts, local watershed improvement committees, public water supply utilities, counties, county conservation boards and cities. These grants are funded by the Watershed Improvement Fund. Funding for these grants comes from annual appropriations and funds from the Animal Agriculture Compliance Fund Penalties.

The Board awarded ten grants totalling \$2,307,554 this year. In addition to providing environmental benefits, these implementation projects help stimulate economic activity and create jobs through the purchase of local goods and services. Additional grants will be awarded this spring.

The Board extends its gratitude to the Governor and the General Assembly for supporting this visionary effort to improve water quality. The Board is looking forward to continuing this initiative.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Ballou".

Robert Ballou, Chair
Watershed Improvement Review Board

Cc: Bill Northey
Michael Naig
Members, Watershed Improvement Review Board

RB:JN

Watershed Improvement Review Board Calendar Year 2013 Annual Report

The Watershed Improvement Fund and the Iowa Watershed Improvement Review Board (WIRB) were created in 2005. This statute is now codified in Iowa Code Chapter 466A.

The fifteen-member Board conducted ten meetings throughout the year in-person or via teleconference. Meetings were held January 17, February 8, April 12, May 10, June 10, August 7, August 29, September 27, November 8 and December 2. Attachment 3 lists the board members and their organization affiliation.

The Board completed one Request For Applications (RFAs) for the Watershed Improvement Fund. The RFA was announced August 29, 2013 and closed October 15, 2013.

August 5, 2011 Closing Date Request For Applications: The Board received 22 applications in response to this RFA. These applications requested \$5.1 million in Watershed Improvement Funds and leveraged an additional \$9.1 million for a total of \$14.2 million of watershed project activity proposed.

On November 8, after reviewing and ranking the applications individually from this RFA, the Board met and selected ten applications for funding. The ten applications were approved for \$2,307,544 of Watershed Improvement Funds. Data on the ten selected projects in this RFA include the following:

- These projects included portions of 15 counties.
- The \$2.3 million requested of Watershed Improvement Funds leveraged an additional \$6.5 million for a total of \$8.8 million in watershed improvements.
- Approved projects ranged in funding from \$60,000 to \$300,000.

Attachment 1 lists the approved projects' name, applicant name, project length, county or counties where located, and funding amount for the October 15, 2013 closing date RFA. A second RFA was issued December 13, 2013 and will close February 28, 2014.

Attachment 2 is a map showing the locations of active and completed projects funded by the WIRB since 2005. There are 80 completed projects and 62 active projects.

In cooperation with the Treasurer of State, submitted the 2013 year-end report for the Rebuild Iowa Infrastructure Fund and the Revenue Bonds Capitals II Fund to the Legislative Services Agency and the Department of Management.

Attachment 4 contains the 2013 annual progress reports submitted from active projects or projects finished in 2013.

Attachment 1. Watershed Improvement Fund Grants Awarded From the RFA Ending October 15, 2013.

Watershed Name	Organization	Project Length	Counties	Grant Amount
Yellow River Headwaters	Winneshiek SWCD	3 years	Winneshiek	\$300,000.00
Clear Creek Watershed	City of Coralville	2 years	Johnson	\$263,540.00
Honey Creek-Lindsey Creek-Dry Run Creek	Delaware SWCD	3 years	Delaware, Clayton	\$60,000.00
Central Park Lake	Jones County Conservation Board	2 years	Jones	\$121,698.00
West Fork Middle Nodaway River	Adair SWCD	3 years	Adair, Cass	\$298,563.00
Gere Creek	Cherokee SWCD	3 years	Cherokee	\$299,942.00
Rathbun Lake	Rathbun Lake and Water Alliance	3 years	Appanoose, Lucas, Wayne	\$144,000.00
Silver Creek	Howard SWCD	3 years	Howard, Winneshiek	\$240,000.00
Mosquito Creek	West Pottawattamie SWCD	3 years	Pottawattamie	\$279,811.00
Hurley Creek / McKinley Lake	City of Creston	3 years	Union	\$300,000.00
Funding Approved by the Watershed Improvement Review Board				\$2,307,554.00

[illegible]

**Attachment 3. Appointed Members of the Watershed Improvement Review Board
January 1 - December 31, 2013, Iowa Code Chapter 466A**

Name	City	Term Ending	Sponsoring Organization
Robert Ballou	Monticello	2016	Iowa Soybean Association
Jane Weber	Bettendorf	2015	Soil and Water Conservation Districts of Iowa
Larry Alliger (January—October)	Gowrie	2013	Iowa Farm Bureau
Greg Rinehart (November—Dec.)	Boone	2015	Iowa Farm Bureau
Jolee Belzung (January--April)	Ankeny	2013	Iowa Association of Water Agencies
Carol Sweeting (May--December)	Iowa City	2016	Iowa Association of Water Agencies
Dave Coppess	West Des Moines	2015	Agribusiness Association of Iowa
Jim Gillespie	Earlham	2014	Representative of IDALS
Larry Gullett	Oxford	2015	Iowa Association of County Conservation Boards
Susan Heathcote	Des Moines	2015	Iowa Environmental Council
Steve Hopkins	Des Moines	2014	Representative of DNR
Debra Karwal (January—April)	Elliott	2013	Iowa Pork Producers
Carrie Keppy (May—December)	Davenport	2014	Iowa Pork Producers
Lisa Walters	West Des Moines	2016	Iowa Rural Water Association
Dennis Black	Grinnell	2015	State Senator
David Johnson	Ocheyedan	2015	State Senator
Jarad Klein	Keota	2015	State Representative
Todd Prichard	Charles City	2015	State Representative

Attachment 4. 2013 Annual Project Reports Table of Contents

<u>Project ID</u>	<u>Watershed Name</u>	<u>Organization</u>	<u>Counties Where Located</u>	<u>Page</u>
9006	Bear Creek Watershed	Delaware SWCD	Delaware	7
1210	Central Park Lake Watershed	Jones County Conservation Board	Jones	8
1210IJ	Central Park Lake Watershed	Jones County Conservation Board	Jones	9
1214	Clear Lake Beach Bacteria Improvement	Hancock SWCD	Cerro Gordo, Hancock	10
1224	Competine Creek Partnership Watershed Project	Wapello SWCD	Jefferson, Keokuk, and Wapello	11
1022	Dry Run Creek	Black Hawk SWCD	Black Hawk	12
1206	Dry Run Creek	Black Hawk SWCD	Black Hawk	13
1113	Duck Creek Watershed	City of Davenport	Scott	14
1243	Fox River Water Improvement Project	Fox River Ecosystem Development Board	Appanoose, Davis, Van Buren	15
9020	Fox River Water Improvement Project	Fox River Ecosystem Development Board	Appanoose, Davis	16
1204	Headwaters North Fork Maquoketa River Watershed	Dubuque SWCD	Dubuque, Delaware	17
1234	Honey-Lindsey-Dry Run Creeks	Delaware SWCD	Delaware, Clayton	18
1016	Iowa Great Lakes Targeted Watershed	Dickinson SWCD	Dickinson	19
1242	Lake Meyer Water Quality	Winneshiek SWCD	Winneshiek	20
1240	Little Bear Watershed	Poweshiek SWCD	Poweshiek	21
9012	Little River Lake Watershed	Decatur SWCD	Decatur	22
9009	Lost Creek Watershed	Lee SWCD	Lee	23
9014	Lytle Creek Watershed	Limestone Bluffs RC&D Area, Inc.	Jackson	24
9032	Miller Creek Watershed	Monroe SWCD	Monroe	25
1233IJ	Miller Creek Watershed	Monroe SWCD	Monroe	26

<u>Project ID</u>	<u>Watershed Name</u>	<u>Organization</u>	<u>Counties Where Located</u>	<u>Page</u>
1208	North Raccoon River Watershed	Buena Vista SWCD	Buena Vista, Pocahontas	27
1004	Rathbun Lake Special Project	Rathbun Land and Water Alliance	Lucas, Wayne	28
1103	Rathbun Lake Special Project	Rathbun Land and Water Alliance	Lucas, Wayne	29
1221	Rathbun Lake Special Project	Rathbun Land and Water Alliance	Appanoose, Lucas, Wayne	30
9018	Rathbun Lake Special Project	Rathbun Land and Water Alliance	Appanoose, Clarke, Decatur, Lucas, Wayne	31
9005	Silver Creek Watershed Project	Clayton SWCD	Clayton	32
1223	South Chequest Creek Watershed	Davis SWCD	Davis	33
1241IJ	Swan Lake Watershed	Carroll CCB	Carroll	34
1102	Twelve Mile Watershed	Creston City Water Works	Union, Adair	35
1231	Twelve Mile Watershed	Union SWCD	Adair, Union	36
1202	Upper Otter Creek Watershed	Fayette SWCD	Fayette	37
9007	Upper Buffalo Creek Watershed	Buchanan SWCD	Buchanan, Fayette	38
1014	Walnut Creek Watershed	Montgomery and East Pottawattamie SWCDs	Montgomery, Pottawattamie	39
1114	Walnut Creek Watershed	Montgomery and East Pottawattamie SWCDs	Montgomery, Pottawattamie	40
1209	Waterloo Creek Watershed	Allamakee SWCD	Allamakee	41
1245IJ	West Tarkio Watershed	Page SWCD	Page	42
1012	Yellow River Headwaters	Winneshiek SWCD	Winneshiek, Allamakee	43

Project Name: 9006-003 Bear Creek Watershed Project
Project Sponsor: Delaware Soil and Water Conservation District
Length of Project: January 1, 2010 to June 30, 2013

Counties included in the project area: Delaware

Total Watershed Improvement Funds awarded for this project:	\$ 347,950.00
Total Watershed Improvement Funds spent:	\$ 246,972.00
Total Watershed Improvement Funds obligated:	\$ <u>0.00</u>
Watershed Improvement Fund unobligated balance as of 6/30/2013:	\$ 100,978.00

Project objectives:

- To administer WIRB and EQIP-MRBI funds, thereby implementing planned activities, including terraces, sediment control basins, grassed waterways, and streambank stabilization
- To improve Livestock Waste Storage
- To improve Livestock Waste Usage
- To Decrease Sediment Losses to Bear Creek by 2,319 tons/year.
- To improve Education and Outreach

Summary of Accomplishments and Water Quality Outcomes 2010-2013

Since the start of this project, seven landowners installed 15,750 feet of terraces, using WIRB funds and significant MRBI-EQIP dollars from USDA. Another 8000 feet is contracted through EQIP to be constructed Fall 2013. **Sediment savings from the terraces already built: 294 tons annually.** The 8000' contracted should add an additional 140 tons of sediment savings.

WIRB funded 15 sediment control basins for five different landowners, **saving 127 tons of sediment delivery.** Over 19 acres of grassed waterways, using WIRB, CRP, and EQIP were built by seven landowners that will cut **sediment delivery to the stream by 406 tons annually, and 527 pounds of phosphorous.** Another 3.6 acres of waterway are contracted through EQIP and should contribute a savings of over 70 tons of sediment. No-till, grazing management, streambank repair, and filter strips accounted for another **186 tons of sediment reduction annually.**

This only begins to describe the accomplishments of this Project. Much was done to improve livestock facilities within the watershed. Seven facilities have been, or are soon contracted to, be built to improve manure storage. 2 tanks have been completed, a hoop barn replaced 3 open lots prone to manure movement. 2 more pits and a monoslope barn will soon be built. A feedlot adjacent to Bear Creek has been closed and replaced by a hoop barn a mile away. All of these contracts, as well as those for waterways, basins, terraces, etc., were required to draw up a nutrient management plan before any construction, providing valuable information to 13 farm operations. These improvements will improve nutrient and bacterial delivery to the stream for years to come. Several soil quality demonstrations, as well as successful crops on the farms of 3 no-tillers, has led to more no-till experimentation in the watershed.

Projects funded over the 3 1/2 year Bear Creek Project reduced annual sediment delivery by 1013 Tons annually.

Project Name: 1210-007 Central Park Lake Watershed
Project Sponsor: Jones County Conservation Board
Length of Project: November 1, 2012 to January 31, 2016

Counties included in the project area: Jones

Total Watershed Improvement Funds awarded for this project:	\$17,444
Total Watershed Improvement Funds spent:	\$14,250
Total Watershed Improvement Funds obligated:	<u>\$ 0</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 3,194

Project objectives:

1. Improve water quality by reducing bacteria levels to provide water safe for full body immersion when participating in water based recreational activities.
2. Improve water quality to support a healthy, self-sustaining fishery.
3. Improve water quality so the lake can be removed from Iowa's 303(d) List of Impaired Waters.
4. Provide a lake basin that will sustain a healthy fishery, improved water quality and recreation for 50 years.

Summary of accomplishments and water quality outcomes

The Central Park Lake Watershed Project has made great strides with the help of the Watershed Improvement Review Board's grant. An engineering plan was developed in early 2013 that involved the construction of several septic systems, a lagoon reclamation, and a wetland design. With oversight of the Jones County Conservation Board and consulting engineers, the septic systems were fully installed late in 2013. The successful septic system installation has allowed wastewater from a camper dump station, residence, campground, and shower house/restroom that once dumped into a single cell lagoon to be more effectively treated in over 1,000 feet of septic field lines. Septic tanks are providing an easy method of solids removal while the septic fields allow for slow adsorption and filtering of the wastewater before it makes its way into Central Park Lake.

Once the septic systems were in place the lagoon's contents were pumped and applied as fertilizer on neighboring farmland. The remaining sludge was excavated and moved outside Central Park Lake's watershed. The lagoon's dikes were then pushed into the remaining depression to form a wetland. This wetland has already begun to collect and filter water from higher in the watershed. In the process it is capturing sediments and nutrients that would have otherwise flowed directly into the lake.

To date the bulk of this stage of the Central Park Lake Watershed Project has been completed. This project is and will continue to be a tremendous improvement to the water resources in and around Central Park Lake. With an average of 58,000 visitors to Central Park each year, this project is sure to increase the enjoyment and knowledge of Iowa's outstanding partnerships and water resources.

Project Name: 1210-007IJ Central Park Lake Watershed
Project Sponsor: Jones County Conservation Board
Length of Project: September 9th 2013 to June 30th 2014

Counties included in the project area: Jones

Total Watershed Improvement Funds awarded for this project:	\$79,206
Total Watershed Improvement Funds spent:	\$61,770
Total Watershed Improvement Funds obligated:	<u>\$ 5,872</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$11,564

Project objectives:

1. Improve water quality by reducing bacteria levels to provide water safe for full body immersion when participating in water based recreational activities.
2. Improve water quality to support a healthy, self-sustaining fishery.
3. Improve water quality so the lake can be removed from Iowa's 303(d) List of Impaired Waters.
4. Provide a lake basin that will sustain a healthy fishery, improved water quality and recreation for 50 years.

Summary of accomplishments and water quality outcomes

The Central Park Lake Watershed Project has made great strides with the help of the Iowa Jobs grant. An engineering plan was developed in early 2013 that involved the construction of several septic systems, a lagoon reclamation, and a wetland design. With oversight of the Jones County Conservation Board and consulting engineers, the septic systems were fully installed late in 2013. The successful septic system installation has allowed wastewater from a camper dump station, residence, campground, and shower house/restroom that once dumped into a single cell lagoon to be more effectively treated in over 1,000 feet of septic field lines. Septic tanks are providing an easy method of solids removal while the septic fields allow for slow adsorption and filtering of the wastewater before it makes its way into Central Park Lake.

Once the septic systems were in place the lagoon's contents were pumped and applied as fertilizer on neighboring farmland. The remaining sludge was excavated and moved outside Central Park Lake's watershed. The lagoon's dikes were then pushed into the remaining depression to form a wetland. This wetland has already begun to collect and filter water from higher in the watershed. In the process it is capturing sediments and nutrients that would have otherwise flowed directly into the lake.

To date the bulk of this stage of the Central Park Lake Watershed Project has been completed. This project is and will continue to be a tremendous improvement to the water resources in and around Central Park Lake. With an average of 58,000 visitors to Central Park each year, this project is sure to increase the enjoyment and knowledge of Iowa's outstanding partnerships and water resources.

Project Name: 1214-008 Clear Lake Beach Bacteria Improvement Project
Project Sponsor: Hancock Soil and Water Conservation District
Length of Project: January 1, 2013- January 31, 2015

Counties included in the project area: Cerro Gordo and Hancock

Total Watershed Improvement Funds awarded for this project:	\$20,000
Total Watershed Improvement Funds spent:	\$20,000
Total Watershed Improvement Funds obligated:	\$ 0
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 0

Project objectives:

- Reduce beach bacteria levels at all three Clear Lake public swim beaches
- Continue source tracking of beach bacteria
- Determine the effectiveness of the improvements
- Educate the public about the project
- Septic system improvements
- Conduct more frequent beach cleaning

Summary of accomplishments and water quality outcomes

There were more goose deterrents installed at McIntosh Woods Beach between Memorial Day and Labor Day to reduce the goose usage of the swim beach. The second beach cleaner was purchased in June 2013 which allowed more frequent beach cleaning at McIntosh Woods Beach. They were able to clean the beach at least twice a week and more as needed. The other beach cleaner was kept at Clear Lake State Park and was used more often as needed. They used it twice a week or more as needed. They were able to perform the cleanings more often since there was no time taken for transporting from one site to another. The first beach cleaner was also used at City Beach as needed.

Tracking of beach bacteria continued this year which seemed to show success of the cleaning. There were no beach closures this year due to high bacteria. Due to frequent cleaning of the beaches, the goose waste was picked up often and did not sit on the beach to break down.

Displays of the beach cleaner and how it was funded, has helped to educate the public on the purpose and importance of keeping the geese away and the beach clean of waste. The public has shown a large interest in how the goose waste affects water quality and beach bacteria. They also have an understanding of WIRB and how the funds are used across the state.

At this time there have been no septic updates done due to the change in watershed project coordinators. The new list is being compiled by the Cerro Gordo Department of Health and contact will be made this spring with eligible landowners in the watershed.

Project Name: 1224-012 Competine Creek Partnership Watershed Project
Project Sponsor: Wapello County Soil & Water Conservation District
Length of Project: January 11, 2013 to February 28, 2015

Counties included in the project area: Jefferson, Keokuk, and Wapello

Total Watershed Improvement Funds awarded for this project:	\$100,000.00
Total Watershed Improvement Funds spent:	\$ 0
Total Watershed Improvement Funds obligated:	<u>\$ 66,352.50</u>
Watershed Improvement Fund unobligated balance as of 12/31/2012:	\$ 33,647.50

Project objectives:

- Establish 50,943' of tile outlet terraces, 5 grade stabilization structures and 10 water and sediment basins over the 2 years of the project
- Reduce sediment delivery to Competine Creek by 2,016 tons/year and control runoff water on 500 acres for flood control.
- Conscientious administration ensuring objectives planned are implemented
- Conduct an information and education program to increase awareness and knowledge of Competine Creek water quality issues to watershed residents, and the local community

Summary of accomplishments and water quality outcomes

- Completed 13,193' of tile outlet terraces, 1 grade stabilization structures, and 4 water and sediment basins.
- Obligated funding for 41,122' of tile outlet terraces, and 2 grade stabilization structures.
- Reduced sediment delivery to Competine Creek by an estimated 2927 tons/year
- Partnered with WSPF, WPF, EQIP, and landowner funds to complete these projects.
- Held annual Learning Farms field days to teach landowners about conservation practices such as cover crops and nutrient sampling.
- Worked with Pekin FFA student to conduct water monitoring on Competine Creek and education about nitrogen pollution.
- Held a booth at the annual Cow Calf Conference in Ottumwa Iowa.
- Received \$5,000 from the Heartland grant to purchase seed for cover crops in the watershed.
- Met with advisory board.
- Project completion has been slow this year, but several projects are nearing completion and five more project applications are pending approval.

Project Name: 1022-013 Dry Run Creek Watershed Improvement Project
Project Sponsor: Black Hawk Soil and Water Conservation District
Length of Project: January 2011 – November 2013

Counties included in the project area: Black Hawk

Total Watershed Improvement Funds awarded for this project:	\$ 48,400
Total Watershed Improvement Funds spent:	\$ 48,400
Total Watershed Improvement Funds obligated:	\$ <u>0</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ <u>0</u>

Project objectives:

- Effectively administer the Dry Run Creek Watershed Project to ensure all objectives and activities planned are implemented and progress is reported to partners.
- Implement two bioretention cells for the University of Northern Iowa New Student Housing Phase II site.
- Document water quality and other environmental benefits of the practices installed.
- Conduct information and education program to increase awareness and knowledge of Dry Run Creek water quality issues to watershed residents, and the local community.

Summary of accomplishments and water quality outcomes

This project is complete. Originally, funding was to support Phase I of the UNI New Student Housing complex (two bioretention cells and one green roof). In cooperation with another funding source the WIRB board agreed to redirect funds to Phase II of the UNI New Student Housing complex site. Therefore, WIRB now funds two bioretention cells totaling 18,000sq.ft. to control first-flush runoff from two parking lots.

The North parking lot bioretention cell is 7,000 ft² and treats about 751,036 gallons of runoff annually. The South parking lot bioretention cell is 11,000 ft² and treats about 991,894 gallons of runoff annually. According to Source Loading and Management Model for Windows (WinSLAMM), the two installed bioretention cells, totaling 18,000 ft² treat 2.48 acres of impervious surfaces and treat 232,996 cu. ft. or 1,742,931.12 gallons of runoff annually and reduce annual phosphorus levels by 2.47lbs.

The installed practices are depression basins with an engineered soil subgrade. Stormwater runoff from adjacent parking lots is directed towards these cells and is collected in the upper layer of the bioretention cell system where it filters through the surface vegetation, and pervious soil layer and is temporarily stored in a stone aggregate base layer.

Twice a year (Spring/Fall) Water Quality Monitoring Snapshot events are held in the DRC Watershed. Over thirty different sites on DRC are monitored and have samples collected. Information gathered from these events help provide water quality information on the health of the creek.

Both the Watershed Coordinator for the DRC project and the Assistant Director of Operations Planning at UNI have been responsible for outreach and educational activities highlighting the grant funded practices. Six tours were given and numerous presentations to various groups and organizations over the life of this project highlighting practices installed in the watershed including the WIRB funded practices. An informational sign will be installed at the practice location.

Project Name: 1206-004 Dry Run Creek Watershed Improvement Project
Project Sponsor: Black Hawk Soil and Water Conservation District
Length of Project: January 1, 2013 to December 31, 2015

Counties included in the project area: Black Hawk

Total Watershed Improvement Funds awarded for this project:	\$19,853
Total Watershed Improvement Funds spent:	\$0
Total Watershed Improvement Funds obligated:	<u>\$19,853</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$0

Project objectives:

- Effectively administer the DRC project to ensure all objectives and activities planned are implemented and progress is reported to partners.
- Implement one 3,100 sq ft bioretention cell for the University of Northern Iowa Baker parking lot.
- Document water quality and other environmental benefits of the practices installed.
- Conduct an information and education program to increase awareness and knowledge of Dry Run Creek water quality issues to watershed residents, and the local community.

Summary of accomplishments and water quality outcomes

This project is in the early stages. The preliminary design is complete and the notice of the bid went out December 22, 2013. The bid is scheduled to be awarded at the end of January. Communication between the District and UNI continues to be made. The practice is scheduled to be installed March 2014.

Project Name: 1113-005 Duck Creek Watershed Project
Project Sponsor: City of Davenport
Length of Project: January 1, 2012 to December 31, 2013

Counties included in the project area: Scott

Total Watershed Improvement Funds awarded for this project:	\$300,000
Total Watershed Improvement Funds spent:	\$300,000
Total Watershed Improvement Funds obligated:	\$ 0
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 0

Project objectives:

1. Administer the Duck Creek Watershed Littig Area Detention Basin to ensure all objectives and activities planned are implemented.
2. Construct the Littig Area Detention Basin with a multi-stage outlet structure to detain the water quality volume, channel protection volume, and 5 to 100 year rainfall events.
3. Improve water quality by installing riffle and pool structures on the low-flow channel and installing native plants and trees within the basin.
4. Conduct a public outreach program to increase awareness and knowledge of Duck Creek water quality issues and the benefits of installing this structure to watershed residents, and the local community.

Summary of accomplishments and water quality outcomes

The project was designed by Wenck Associates, Inc. and bid documents and plans produced. During the design process, multiple meetings were held with representatives of the City of Davenport Public Works Department and local residents. The plans and specifications were approved by the City of Davenport Council on September 5th, 2012. Six bids were received and opened publicly on September 10, 2012. The contract with Langman Construction of Rock Island, Illinois was approved by the City of Davenport Council on November 7, 2012. Construction of the project began November 26, 2012.

Construction of the project was completed in late October of 2013. Temporary and permanent seeding was completed at this time. The temporary seed germinated before frost conditions and is serving to provide erosion control over the completed basin. Mitigation for the stream section that is enclosed in pipe was completed by installing an 870 foot long by 30 foot wide native buffer strip on the north bank of Duck Creek upstream of the Harrison Street Bridge. A public opening ceremony was conducted on December 2, 2013. Mayor Bill Gluba and Natural Resources Manager Brian Stineman provided remarks to the media during the ribbon cutting ceremony.

All goals of this project have been achieved. The city shall continue to monitor the area and utilize it for education and outreach as well as maintain the native vegetation in perpetuity.

Project Name: 1243-020 Fox River Water Quality Project
Project Sponsor: Fox River Ecosystem Development Board
Length of Project: July 1, 2013 to June 30, 2015

Counties included in the project area: Appanoose, Davis, and Van Buren Counties

Total Watershed Improvement Funds awarded for this project:	\$100,000.00
Total Watershed Improvement Funds spent:	\$ 1,540.81
Total Watershed Improvement Funds obligated:	<u>\$ 11,023.25</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 87,435.94

Project objectives:

- Administer the Fox River Water Quality Improvement Project to ensure all objectives and activities planned are implemented.
- Construct 13 grade stabilization structures on treating 455 acres.
Construct 10 water and sediment control basins treating 50 acres.
Construct 7,000 feet of terraces treating 40 acres.
Install 600 acres of cover crops.
- Reduce sediment delivery to Fox River by 2,060 tons of sediment per year.
- Conduct an information and education program to increase awareness and knowledge of Fox River Watershed water quality issues to watershed residents, and the local community.

Summary of accomplishments and water quality outcomes

2013 was a fairly productive year for the Fox River Water Quality Project. There were several projects that were completed despite the wet spring and the government shutdown that took place in October. The project completed two water and sediment control basins and thirteen acres of cover crop. There were also two grade stabilization structures, two water and sediment control basins and 2,650 feet of terraces obligated.

In addition to this WIRB project the watershed also has funding through WSPF/WPF that is in the same priority area. Projects completed with this funding include: five grade stabilization structures, 34 water and sediment control basins, 3,493' of terraces, and 104 acres of cover crop.

Funding for cover crop through the Water Quality Initiative took precedence over Fox River cover crop funding due to the fact that eligible applicants were able to secure funding for more acres at a higher rate per acre. Hopefully next year we will be able to use all of our cover crop funding. It would be suggested that if there is funding again through WQI that we revise the WIRB cover crop cost share to match the same dollar amount per acre.

There is still a tremendous demand for assistance in the Fox River Watershed and there is a large list of applicants. The FRED board has been waiting for partner funds, primarily EQIP before approving any additional projects for WIRB funding.

Project Name: 9020-012 Fox River Water Improvement Project
Project Sponsor: Fox River Ecosystem Development Board
Length of Project: January 1, 2010 to December 31, 2014

Counties included in the project area: Appanoose and Davis

Total Watershed Improvement Funds awarded for this project:	\$493,750.00
Total Watershed Improvement Funds spent:	\$292,619.79
Total Watershed Improvement Funds obligated:	<u>\$ 81,008.92</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$120,121.29

Project objectives:

- Administer the Fox River Ecosystem Improvement Project to ensure all objectives and activities planned are implemented.
- All practices will be installed into priority areas within the impaired segment of the Fox River addressing sediment delivery reductions to the Fox River.
- Construct 50 grade stabilization structures controlling sediment delivery from 1,750 acres entering Fox River.
- Construct 50 water and sediment control basins controlling sediment delivery from 250 acres of pasture and cropland.
- Construct 30,000ft. of terraces to control sediment delivery from 120 acres of cropland.

Summary of accomplishments and water quality outcomes

- WIRB Coordinator, Craig Foster and field office staff administered all projects to ensure objectives and activities planned were implemented.
- Construction has been completed on 22 grade stabilization structures controlling 1,113 acres and reducing sediment delivery by 2,801 tons per year.
- Construction has been completed on 92 water and sediment basins controlling 362 acres and reducing sediment delivery by 1,210 tons per year.
- Construction has been completed on 33,124ft of terraces controlling 254 acres and reducing sediment delivery by 636 tons per year.

Additional accomplishments:

- Fox River Impairment project received the CDI's "outstanding watershed Award" in 2010.
- A watershed tour of Fox River took place in 2013 that included guest Secretary Bill Northey, commissioners, landowners and watershed coordinators Craig Foster and Felicia Campbell.
- Most of the landowners in the project areas have high interest and are willing to implement and install these practices on their farms to improve water quality with technical and financial assistance.

Project Name: 1204-003 Headwaters North Fork Maquoketa River Watershed
Project Sponsor: Dubuque Soil & Water Conservation District
Length of Project: January 1, 2013 – June 30, 2015

Counties included in the project area: Dubuque, Delaware

Total Watershed Improvement Funds awarded for this project:	\$99,570.00
Total Watershed Improvement Funds spent:	\$24,314.59
Total Watershed Improvement Funds obligated:	<u>\$15,685.41</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$59,570.00

Project objectives:

- To help landowners and operators in the three selected sub-watersheds voluntarily implement conservation systems that reduce nutrient loss; protect, restore, and enhance wetlands; maintain agricultural productivity; improve wildlife habitat; and achieve other objectives, such as flood prevention.

Summary of accomplishments and water quality outcomes

The Headwaters of the North Fork Maquoketa River Watershed is a 75,401 acres watershed located to the north of Dyersville Iowa stretching across Dubuque and Delaware counties. Watershed landowners are adopting Natural Resources Conservation Service (NRCS) technical practices to address excessive nutrient runoff and assist Iowa with their Nutrient Reduction Strategy.

In 2012 the Watershed Improvement Review Board (WIRB) approved our proposal to provide personnel to assist the Dubuque Soil & Water Conservation District in implementing their Mississippi River Basin Initiative (MRBI) project. The MRBI project was currently in year 4 of the 5 year project, was without staff, and needed this personnel to assist with the ongoing contracting and field work. The WIRB funding for a watershed coordinator began in January of 2013.

In 2013 \$1,608,298.00 was allocated through the MRBI project to an additional 26 watershed landowners in 42 contracts to address water quality concerns on 4,750 acres. Also in 2013 109 active contracts received payments in excess of \$792,000.00 for applying conservation practices within the watershed.

The Dubuque SWCD has conducted outreach and education within the watershed including participation in a cover crop education field day. The Delaware SWCD hosted a farm tour and demo for Ag Waste Treatment Storage options and manure spreader calibrations. Both of these address nitrogen and phosphorus reduction practices implemented in the watershed.

Project Name: 1234-016 Honey-Lindsey-Dry Run Creeks
Project Sponsor: Delaware SWCD
Length of Project: July 1, 2013 to December 31, 2015

Counties included in the project area: Delaware and Clayton Counties

Total Watershed Improvement Funds awarded for this project:	\$100,000.00
Total Watershed Improvement Funds spent:	\$ 23,209.05
Total Watershed Improvement Funds obligated:	<u>\$ 1,790.95</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 75,000.00

Project objectives:

Administer the project and implement all activities and objectives in the Honey-Lindsey- Dry Run Watershed, using primarily NRCS-MRBI funds to implement conservation practices. Specifically, the goals is to improve water quality in the entire watershed by reducing surface runoff of sediment and nutrients, including lowering the nitrates in Manchester's well below Iowa's drinking water standard.

Summary of accomplishments and water quality outcomes

To date, the project has installed 2 grade stabilization structures, with another one contracted to be constructed. One sediment & water control basin has been installed, with 2 more unable to be constructed this year due to weather constraints. 8265 feet of narrow based terraces were constructed in Fall 2013 by three different producers. One acre of waterway was constructed. Cover crops and nutrient management were applied to many acres, some of these using nutrient reduction funds for first time users. **Completed projects in 2013 decreased annual sediment delivery to the watershed by 167 tons, with a corresponding cut in phosphorous delivery by 218 pounds annually.**

Improving ag waste storage and/or putting livestock under roof is drawing a lot of interest across the watershed. The largest cattle feeder in Delaware County closed a lot that was under close scrutiny from DNR because of frequent discharges, and was able to put them under roof on another farm. Another producer is contracted to build a pitted beef barn in 2014, and several farms are under consideration for MRBI funding for improvements. Terraces have become surprisingly popular as more are present to serve as examples. Several wetland practices are being explored in the Dry Run area above Manchester. Two landowners seem very committed to improving areas on their land to filter surface water while slowing down water flowing into populated areas.

The coordinator continues to make contacts to promote the project, as direct, personal contact continues to prove to be the best way to advance watershed goals.

Project Name: 1016-010 Iowa Great Lakes Targeted Watershed Project
Project Sponsor: Dickinson Soil and Water Conservation District
Length of Project: January 1, 2010 to June 30, 2014

Counties included in the project area: Dickinson County

Total Watershed Improvement Funds awarded for this project:	\$168,500.00
Total Watershed Improvement Funds spent:	\$ 90,113.13
Total Watershed Improvement Funds obligated:	<u>\$ 51,957.32</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 26,429.55

Project objectives:

- Install 9,000 feet of grassed waterway
- Install 10 Water and Sediment Control basins
- Protect 1,200 acres with wetland restoration
- Protect 460 acres with Conservation Cover
- Protect 40 acres with filter strips
- Protect 7,500 feet of shoreline
- Construct 14,400 square feet of Low Impact Development Structures

These practices are to be targeted in priority areas and installed in locations where they will do the most good for the dollars spent. The main resource concern for the Iowa Great Lakes is excess Phosphorous. These practices will be constructed in a way that reduces and limits Phosphorous from reaching the lake.

Summary of accomplishments and water quality outcomes

This project has to date protected the Iowa Great Lakes by installing the following practices:

Grassed Waterway: 350 feet

Water & Sediment Control Basins: 6

Protected 1,300 acres with one conservation easement and wetland improvement on 5.7 acres

Seeded 385 acres to conservation cover

Protected 9000 feet of shoreline

Constructed 14,064 square feet of Low Impact Development Practices

These water quality protective practices have stopped the following pollution loads from reaching the Iowa Great Lakes.

Sediment: 28.5 tons of sediment per year has been prevented from reaching a lake.

Nitrogen: 434 pounds of Nitrogen have been stopped from entering a lake.

Phosphorous: 131.5 pounds of Phosphorous has been stopped from entering an Iowa Great Lakes Lake.

Project Name: 1242-019 Lake Meyer Water Quality Project
Project Sponsor: Winneshiek Soil & Water Conservation District
Length of Project: September 1, 2013 - September 30, 2016

Counties included in the project area: Winneshiek

Total Watershed Improvement Funds awarded for this project:	\$ 63,357.00
Total Watershed Improvement Funds spent:	0
Total Watershed Improvement Funds obligated:	0
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 63,357.00

Project objectives:

Goal 1: Reduce delivery of sediment and nutrients to Lake Meyer by target placement of BMP's on Winneshiek CCB lands

- **Objective I:** Expand upon achievements thus far in targeted areas of the LMP and in the progression of watershed project is to construct a Rock Chute Retention Wetland and associated Grade Stabilization BMPs to reduce sediment/nutrients delivered to the lake, pinpoint construction on lands of the Winneshiek CCB thus reducing impacts by sediment and nutrient loading

Goal 2: Increase the culture of conservation among all landowners, producers, urban residents, and visitors to the Lake Meyer Watershed.

- **Objective 1:** Highlight producer's contributions and investment into project participation and promotion of conservation participation. This will be done to ensure the longevity of the Lake Meyer Area and use promotional materials to highlight the importance of water quality projects and BMP's

Summary of accomplishments and water quality outcomes

The Winneshiek SWCD, Winneshiek CCB and WIRB initiated a cooperative agreement to allocate funding to facilitate a watershed project in the Lake Meyer Watershed. \$119,706 in funds has been secured through the Iowa DNR Fish Habitat grant funds in collaboration with this WIRB investment to complete this project. Our NRCS engineer is going through the final checks of the design work for anticipated construction this summer of 2014. The district and its partners have worked extensively on getting all aspects of this project going since funding was secured for the Lake Meyer Project. The LMP advisory board has met and a timeline of activities for the completion of the project has been discussed and approved. Surveying, design and staking of construction points have been initiated. Currently the final design is being approved along with county conservation board preparing an Army Corps of Engineer permitting application for construction is being completed. Water sampling was conducted throughout the past growing season to build a representative baseline of data to measure water quality improvement after practices have been installed. Marketing of stewardship practices for the reduction of nutrients from the watershed is underway with a focus on the urban stormwater runoff into the watershed and as well as agricultural ground. This watershed lies within the Central Turkey River Nutrient Reduction Demonstration Project focus area that will feature management practices that specialize in reducing nutrients in accordance to the state of Iowa Water Quality Initiative.

Project Name: 1240-017 Little Bear Creek Watershed Improvement Project
Project Sponsor: Poweshiek County Soil and Water Conservation District (SWCD)
Length of Project: July 1, 2013 to July 1, 2015

Counties included in the project area: Poweshiek County

Total Watershed Improvement Funds awarded for this project:	\$99,999.00
Total Watershed Improvement Funds spent:	\$ 9,052.09
Total Watershed Improvement Funds obligated:	<u>\$ 5,404.51</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$85,542.40

Project objectives:

- Reduce annual sediment delivery by roughly 16.3% or 1,058 tons and associated phosphorus delivery by 1,375 pounds.
- Develop an information and education program aimed at producers and residents within the headwaters of Grant and Chester townships.

Summary of accomplishments and water quality outcomes

Poweshiek County SWCD approved 875 feet of terrace (completed), 2 basins, 1.3 acres of waterway, and a grade stabilization structure near the stream that will improve water quality by reducing sediment delivery by an estimated 192 tons, and phosphorus by an estimated 249.6 pounds per year. An aerial application of cover crops was also applied to 70 acres within the watershed for an additional estimated sediment delivery reduction of 43 tons and an estimated phosphorus reduction of 55.9 pounds, for a combined estimated sediment delivery reduction of 235 tons and estimated phosphorus reduction of 305.5 pounds per year.

Seventeen volunteers attended the First Annual Little Bear Creek Cleanup Event held in June prior to the start of the project. SWCD and Imagine Grinnell, a local nonprofit organization focused on improving the quality of life for Grinnell residents, cohosted the event and approximately 25 thirty-nine gallon bags of trash were removed from the stream within the City of Grinnell to improve water quality. The next cleanup event will be held in April of 2014, and students from Grinnell College and City of Grinnell employees plan to assist in the event.

With assistance from supporting organizations the information and education goals for the first six months of the project were exceeded. Seven newspaper articles were published locally, 2 radio interviews, and 4 events were held including the first of three rain garden workshops hosted by SWCD and Urban Conservationist, Amy Bouska with the Iowa Department of Agriculture and Land Stewardship (IDALS). The workshop was well attended and afterwards 10 people interested in installing rain gardens contacted the project coordinator. Six of those interested live within the watershed, and two of them are interested in both rain gardens and permeable pavements. Weather permitting; soil tests will be conducted to determine the best locations and sizes of proposed urban practices. If all those interested decide to apply for cost share, there will not be enough funds available.

Project Name: 9012-009 Little River Lake Watershed
Project Sponsor: Decatur SWCD
Length of Project: January 1, 2010 to December 31, 2013

Counties included in the project area: Decatur

Total Watershed Improvement Funds awarded for this project:	\$423,900.00
Total Watershed Improvement Funds spent:	\$422,173.42
Total Watershed Improvement Funds obligated:	\$ <u>0</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 1,726.58

Project objectives:

- Assist landowners to apply best management practices (BMPs) for priority land in the Little River Lake Watershed.
- Perform all project administrative requirements as per Grant agreement and approved application.

Summary of accomplishments and water quality outcomes

This past year was the final year of our WIRB Project. The lake started out 11 feet below normal pool, but was quickly filled to capacity by the early rains and snow melt. Contractors were busy all year long, completing 3720 feet of terraces, 7 grade stabilization structures and 30 water & sediment control basins. These practices utilized the remaining WIRB funds and exceeded all of our construction and sediment delivery goals.

A final public meeting was held in October to update the public on the progress and status of the fishery. An award was presented to the Robert and Ruby Smith Family for all the work they had done in the watershed. The Leon Water Superintendent gave a report of how the water in the lake is as clear as it was when the lake was first built. Water treatment chemicals have been reduced by more than half.

The Decatur SWCD and partners will continue to work with interested landowners to construct additional BMP's in the watershed.

Project Name: 9009-006 Lost Creek Watershed
Project Sponsor: Lee Soil and Water Conservation District
Length of Project: January, 2010 – December, 2014

Counties included in the project area: Lee

Total Watershed Improvement Funds awarded for this project:	\$445,800
Total Watershed Improvement Funds spent:	\$249,701
Total Watershed Improvement Funds obligated:	<u>\$160,000</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$36,099

Project objectives:

- Install BMP's in the watershed that target areas contributing sediment at a rate of one ton or more per acre per year to Lost Creek.
- Limit livestock access to the stream by one-half, reducing stream bank erosion and limiting bacterial contamination in the water body.
- Implement an information and education campaign for the Lost Creek Watershed.

Summary of accomplishments and water quality outcomes

- Fourteen (2 pending final payment) Grade Stabilization Structures completed controlling 1056 acres – sediment delivery reduced by 5245 tons/yr. and phosphorous loading reduced by 6819 pounds/yr. Five additional structures are ready for construction, and up to 2 more structure applications may be approved pending WIRB funding request.
- 57 acres of CRP buffers completed – sediment delivery reduced by 74 tons/yr. and phosphorous loading reduced by 96.2 pounds/yr.
- 132.7 acres of continuous CRP completed – sediment delivery reduced by 358 tons/yr. and phosphorous reduced by 465.4 pounds/yr.
- Tile Outlet Terraces installed protecting 419 acres – sediment delivery reduced by 1306 tons/yr. and phosphorous loading reduced by 1698 pounds/yr.
- 105 acres of Prescribed Grazing applied – sediment delivery reduced by 40 tons/yr. and phosphorous loading reduced by 52 pounds/yr.
- 8 roadside signs and 8 bridge signs installed to identify and educate the public about Lost Creek and the Lost Creek watershed.
- 3 field days have been held concerning buffer strips, CRP program availability, and installation of Grade Stabilization Structures.
- 6 press releases distributed to local media promoting the Lost Creek Watershed project and raising public awareness for the project.
- Continued monitoring of water transparency in Lost Creek by staff and local volunteers.

Project Name: 9014-010 Lytle Creek Watershed
Project Sponsor: Limestone Bluffs RC&D, Inc.
Length of Project: January 1, 2010 - December 31, 2014

Counties included in the project area: Jackson County

Total Watershed Improvement Funds awarded for this project:	\$391,752.76
Total Watershed Improvement Funds spent:	\$352,577.76
Total Watershed Improvement Funds obligated:	\$ <u>0</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 39,175.00

Project objectives:

1. Administer the Lytle Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.
2. Construct a wastewater collection and treatment system for the incorporated community of Leisure Lake to reduce nutrient and bacteria impairments to Lytle Creek, the Maquoketa River, and local groundwater resources.

Summary of accomplishments and water quality outcomes

The existing Leisure Lake community is served by private wastewater systems; there is no public system serving any of the community. Wastewater from many properties eventually discharges to the lake and ultimately to Lytle Creek. Research of the community and public records shows the following conditions and benefits to be derived from the public wastewater system.

1. The Leisure Lake area includes 310 homes/structures that generate wastewater. Of those 310 generators only 25% or 78 have legally permitted on-site systems according to records.
2. The area has 232 homes/structures without proper/permitted treatment. Untreated or inadequately treated wastewater enters and pollutes the environment at a rate of over 31,000 gallons per day.
3. The 3-cell lagoon, lift station, and all collection system mains have been installed.
4. 180 grinder pump stations for the individual properties have been installed with 172 currently in use.
5. The controlled discharge lagoon is a controlled discharge of properly treated wastewater and will benefit the environment, including animal life.
6. The wastewater collection system includes nearly 10 miles of various sizes of wastewater collection piping handling the discharge from 310 individual pumping stations.
7. The project will protect/improve surface water quality of Leisure Lake and Lytle Creek and ground water quality by the elimination of the discharge of untreated or partially treated wastewater and will protect the water supply of residents who utilize the shallow fractured limestone for wells.
8. If additional resources were available, the monthly user rates could be lowered from the estimated \$55-\$60 monthly fees in this low-income community. These rates will be a hardship on a significant percentage of the residents.

Project Name: 9032-017 Miller Creek Water Quality Project
Project Sponsor: Monroe County SWCD
Length of Project: April 1, 2010 to June 30, 2014

Counties included in the project area: Monroe

Total Watershed Improvement Funds awarded for this project:	\$ 255,300.00
Total Watershed Improvement Funds spent:	\$ 239,492.61
Total Watershed Improvement Funds obligated:	<u>\$ 10,593.71</u>
Watershed Improvement Fund unobligated balance as of 1/15/2014:	\$ 5,213.68

Project objectives:

1. Administer Miller Creek Water Quality Project to ensure all objectives and activities planned are implemented.
2. Improve water quality in Miller Creek by reducing sediment delivery by 70% on 3,837 acres of priority land.
3. Construct 14 grade stabilization structures to reduce sediment delivery from 450 acres of priority land.
4. Construct 57 water and sediment control basins to reduce sediment delivery from 120 acres of priority land.
5. Construct 14,690 feet of terraces to reduce sheet and rill erosion on 175 acres.
6. Conduct informational programs to increase awareness and knowledge of Miller Creek Watershed issues to the general public.

Summary of accomplishments and water quality outcomes

- 14 grade stabilization structures are designed and built with one in started in December to be completed by spring meeting our goals by one.
- 14,770 feet of terraces were built this year surpassing our goal of 14,690 feet.
- 57 basins were planned with 63 designed and built exceeding our goal by 6 additional structures.
- 1 grazing system with two watering facilities utilizing EQIP was implemented impacting 110 acres.
- A total of 206.6 acres of warm season grasses were planted utilizing CRP funding
- A total of 106.2 acres of cool season grasses were planed utilizing both EQIP and CRP funding+.
- Quarterly news releases and news articles were submitted to the local paper
- 3 annual newsletters were sent out to landowners, partners and the community of the watershed.
- Landowner awareness though field days and demonstrations
- Two Landowners in watershed were selected by the Monroe SWCD to receive conservation achievement awards for their outstanding work and dedication to conservation.

Miller Creek continues to be a challenge for landowners. With extreme weather patterns the past few years' landowners are still experiencing erosion in much of the upland areas being cropped. Even with our goals being met there is still a lot of interest in conservation efforts with in the watershed. As this project neared the final year, updated data that had been obtained since the beginning of the project was used to generate new maps of the watershed. DNR GIS analyst was able to use new tools such as lydar to provide more accurate maps than originally used in the 2008 assessment. Miller Creek has been focusing on 3,837 acres of priority land, in which 1,589.5 acres have been controlled, resulting in a reduction of 5,059.85 tons of sediment and 6,578 lbs of phosphorus reduced from entering into Miller Creek.

Project Name: 1233-015IJ Miller Creek Water Quality Project

Project Sponsor: Monroe County SWCD

Length of Project: April 1, 2013 to June 30, 2014

Counties included in the project area: Monroe

Total Watershed Improvement Funds awarded for this project:	\$ 84,075.00
Total Watershed Improvement Funds spent:	\$ 9,222.74
Total Watershed Improvement Funds obligated:	\$ <u>15,163.88</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 59,688.38

Project objectives:

- 1. Finish out all objectives and activities that were planned and ensure practices are implemented in the targeted priority areas.**
- 2. Improve water quality in Miller Creek by reducing sediment delivery by an additional 842 tons on 245 acres of priority land.**
- 3. Construct one additional grade stabilization structure within priority areas controlling 30 acres of runoff and reducing sediment by 175 tons.**
- 4. Construct 22 water and sediment control structures reducing sediment delivery by 361 tons controlling runoff from an additional 51 acres.**
- 5. Construct 2,800 feet of terraces reducing 90 tons sediment from sheet and rill erosion on 35 acres.**

Summary of Accomplishments and Water Quality Outcomes

BMP's such as terraces and basins needed for our project goals are typically seasonal after crops are harvested. Due to the government shutdown many projects were delayed during the most crucial time when crops were coming out. When construction did resume, the onset of early winter weather before Thanksgiving slowed work, but then came to a stop by the middle of December. To date, there are three basins and 4 terraces certified and complete. Nine basins and two terraces are surveyed and designed ready for construction with an additional six basins planned. There are also two potential sites for grade stabilization structures planned for early spring. With limited technical staff and as the new watershed coordinator still training, many projects are still waiting to be surveyed and designed. Even with several conservation practices installed during the course of the whole Miller Creek project, there are still landowners who see erosion affecting loss of crop ground and water quality. WQI provided some landowners funding to plant fall cover crops this past year in efforts to slow erosion in the watershed but for some, there was no real incentive to do so on their own due to lack of knowledge or funding. There has been positive feedback from landowners to continue efforts of conservation in the watershed while encouraging their neighbors to work toward a better strategy for an overall nutrient management project for the future.

Project Name: 1208-005 North Raccoon River Watershed
Project Sponsor: Buena Vista Soil and Water Conservation District
Length of Project: October 15, 2012 – February 15, 2016

Counties included in the project area: Buena Vista and Pocahontas Counties

Total Watershed Improvement Funds awarded for this project:	\$63,900.00
Total Watershed Improvement Funds spent:	\$33,492.00
Total Watershed Improvement Funds obligated:	<u>0</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$30,408.00

Project objectives:

1. Administer the North Raccoon River MRBI Watershed Project to ensure all objectives and activities planned are implemented.
2. Increase knowledge of MRBI financial assistance and conservation practices available to producers in each watershed through education and outreach.
3. Reduce nutrient loading and sediment delivery to the North Raccoon River through the installation of conservation practices.

Summary of accomplishments and water quality outcomes

Certified 9700 acres of Cover Crops planted in the North Raccoon River Watershed fall 2013.
Certified 1333 acres of No-Till/Strip-Till farming practiced.
Certified 1333 acres of land with Nutrient Management practices applied.
Certified construction of 4 Waste Storage Facilities with associated Comprehensive Nutrient Management Plans. The previous year we certified 9,105 acres of cover crop, 765 acres of no-till/strip-till and 1,118 acres of land with nutrient management.

We are seeing a heightened awareness for the need to apply conservation practices and more interest in putting practices on the ground, in particular cover crops and a desire to improve overall soil health.

With implementation of the above practices it is estimated that we will achieve a significant reduction of: Nitrate, Phosphorus and Sediment loss for which calculated estimates should soon be available.

**Project Name: 1004-002 Rathbun Lake Special Project:
Strategic Use of Sediment Basins and Terraces *
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: November 24, 2010 to June 30, 2014 ***

Counties included in the project area: Lucas and Wayne

Total Watershed Improvement Funds awarded for this project *:	\$100,000.00
Total Watershed Improvement Funds spent:	\$ 49,338.69
Total Watershed Improvement Funds obligated:	<u>\$ 50,009.75</u>
Watershed Improvement Funds unobligated balance as of 12/31/2013:	\$ 651.56

Project Objectives:

- Assist landowners to construct five sediment retention basins to reduce annual sediment and phosphorus delivery to Rathbun Lake by 1,500 tons and 5,000 pounds respectively *
- Assist landowners to construct 28,500 feet of terraces to reduce annual sediment and phosphorus delivery to Rathbun Lake by 430 tons and 1,425 pounds respectively *
- Conduct watershed outreach and water quality monitoring activities to support the construction of sediment retention basins and terraces as well as the application of associated best management practices for priority land
- Perform all administrative requirements as per grant agreement and approved application

Summary of Accomplishments and Water Quality Outcomes

Rathbun Land and Water Alliance members and partners used geographic information system analysis and field evaluations to identify 6,800 acres of priority land in five targeted sub-watersheds of the Rathbun Lake watershed. Project staff assisted nine landowners to plan and install an estimated 43,080 feet of terraces for approximately 381 acres. The constructed terraces will reduce annual sediment and phosphorus delivery to Rathbun Lake by an estimated 760 tons and 3,582 pounds respectively. Unanticipated challenges will not allow the construction of sediment retention basins to be completed as originally proposed before the end of the project. This change in project activities has resulted in a budget modification, amendment to the grant agreement, and a revised plan of work that focuses on the installation of terraces*.

The Alliance's outreach efforts included: one-on-one contacts with landowners; recognition of selected landowners as *Rathbun Lake Protectors* at the 2013 *Protect Rathbun Lake* meeting; interviews of *Protectors* on WHO radio; articles on *Protectors* for Wallaces Farmer and local media; Rathbun Lake watershed tours; project annual report and newsletter; the *Protect Rathbun Lake* signage program; and Alliance's web page at <http://www.rlwa.org/>. The Alliance received the 2013 Governor's Environmental Excellence Award and the Conservation Districts of Iowa 2013 Outstanding Watershed of the Year Award. Alliance partners also completed water quality monitoring program activities for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners worked with the project's team of experts to plan, carry out, and assess activities. The Alliance's board and team members regularly reviewed progress in project implementation. The Alliance submitted required project progress reports and financial ledgers.

**Project Name: 1103-002 Rathbun Lake Special Project
BMPs for Priority Land in Targeted Sub-Watersheds 2011
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: March 1, 2012 to February 28, 2017**

Counties included in the project area: Lucas and Wayne

Total Watershed Improvement Funds awarded for this project:	\$125,300.00
Total Watershed Improvement Funds spent:	\$ 40,157.35
Total Watershed Improvement Funds obligated:	<u>\$ 8,657.50</u>
Watershed Improvement Funds unobligated balance as of 12/31/2013:	\$ 76,485.15

Project Objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 1,050 tons and 3,490 pounds respectively.
- Conduct geographic information system analysis, water quality monitoring, and watershed outreach activities to support the application of best management practices for priority land.
- Perform all administrative requirements as per grant agreement and approved application.

Summary of Accomplishments and Water Quality Outcomes

Rathbun Land and Water Alliance members and partners have used geographic information systems and field work to identify priority land owned and/or farmed by landowners in the Upper and Lower Dick Creek and Chariton River #4 and #8 targeted sub-watersheds. The Alliance has assisted seven landowners plan and apply best management practices for 375 acres, approximately 180 acres of which was priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 634 tons and 3,612 pounds per year respectively. Practices applied by landowners included terraces, water and sediment control basins, grade stabilization structures, and the conversion of priority land to grassland. The Alliance continued to contact landowners in the targeted sub-watersheds to help them evaluate the need for, and benefits of, applying practices for the priority land that they own and/or farm.

The Alliance's outreach efforts included: one-on-one contacts with landowners; six landowners recognized as *Rathbun Lake Protectors* at the 2013 *Protect Rathbun Lake* meeting, bringing the total number of landowners selected as *Rathbun Lake Protectors* to 47; interviews of *Rathbun Lake Protectors* on WHO radio; installed *Rathbun Lake Protectors* signs; articles on *Rathbun Lake Protectors* in *Wallaces Farmer*; watershed tours for Iowa Secretary of Agriculture Bill Northey and Congressman Dave Loebsack; newsletters for Alliance members and partners; and the Alliance's Internet site at <http://www.rlwa.org/>. The Alliance received the 2013 Governor's Environmental Excellence Award and the Conservation Districts of Iowa 2013 Outstanding Watershed of the Year Award. Alliance partners also completed activities associated with the water quality monitoring program for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners worked with the project's team of experts to plan, carry out, and assess activities. The Alliance's board and team members regularly reviewed progress in project implementation. The Alliance submitted required project progress reports and financial ledgers.

**Project Name: 1221-010 Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2012
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: January 1, 2013 to February 28, 2016**

Counties included in the project area: Appanoose, Lucas, and Wayne

Total Watershed Improvement Funds awarded for this project:	\$ 97,790.00
Total Watershed Improvement Funds spent:	\$ 0.00
Total Watershed Improvement Funds obligated:	<u>\$ 13,074.00</u>
Watershed Improvement Funds unobligated balance as of 12/31/2013:	\$ 84,716.00

Project Objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 1,800 tons and 6,000 pounds respectively.
- Conduct geographic information system analysis, water quality monitoring, and watershed outreach activities to support the application of best management practices for priority land.
- Perform all administrative requirements as per grant agreement and approved application.

Summary of Accomplishments and Water Quality Outcomes

Rathbun Land and Water Alliance members and partners have used geographic information systems and field work to identify priority land owned and/or farmed by landowners in the Middle Wolf Creek #2 and Chariton River #5 and #10 targeted sub-watersheds. The Alliance has assisted two landowners plan the application of best management practices for close to 100 acres. These planned practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 150 tons and 500 pounds per year respectively. Practices planned by landowners include an estimated 8,000 feet of terraces. The Alliance continued to contact landowners in the targeted sub-watersheds to help them evaluate the need for, and benefits of, applying practices for the priority land that they own and/or farm.

The Alliance's outreach efforts included: one-on-one contacts with landowners; six landowners recognized as *Rathbun Lake Protectors* at the 2013 *Protect Rathbun Lake* meeting, bringing the total number of landowners selected as *Rathbun Lake Protectors* to 47; interviews of *Rathbun Lake Protectors* on WHO radio; installed *Rathbun Lake Protectors* signs; articles on *Rathbun Lake Protectors* in *Wallaces Farmer*; watershed tours for Iowa Secretary of Agriculture Bill Northey and Congressman Dave Loebsack; newsletters for Alliance members and partners; and the Alliance's Internet site at <http://www.rlwa.org/>. The Alliance received the 2013 Governor's Environmental Excellence Award and the Conservation Districts of Iowa 2013 Outstanding Watershed of the Year Award. Alliance partners also completed activities associated with the water quality monitoring program for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners worked with the project's team of experts to plan, carry out, and assess activities. The Alliance's board and team members regularly reviewed progress in project implementation. The Alliance submitted required project progress reports and financial ledgers.

**Project Name: 9018-011 Rathbun Lake Special Project:
BMPs for Priority Land in Targeted Sub-Watersheds 2009
Project Sponsor: Rathbun Land and Water Alliance
Length of Project: January 1, 2010 to December 31, 2014**

Counties included in the project area: Appanoose, Clarke, Decatur, Lucas, and Wayne

Total Watershed Improvement Funds awarded for this project:	\$491,800.00
Total Watershed Improvement Funds spent:	\$286,478.78
Total Watershed Improvement Funds obligated:	<u>\$ 62,215.33</u>
Watershed Improvement Funds unobligated balance as of 12/31/2013:	<u>\$143,105.89</u>

Project Objectives:

- Apply best management practices for priority land that will reduce annual sediment and phosphorus delivery to Rathbun Lake by 6,000 tons and 20,000 pounds respectively.
- Conduct geographic information system analysis, water quality monitoring, and watershed outreach activities to support the application of best management practices for priority land.
- Perform all administrative requirements as per grant agreement and approved application.

Summary of Accomplishments and Water Quality Outcomes

Rathbun Land and Water Alliance members and partners used geographic information systems and field work to identify 4,375 acres of priority land owned and/or farmed by 90 landowners in the Lower Chariton Creek, Chariton River #3, Sandy Branch, Hamilton Creek, and Goodwater Creek targeted sub-watersheds. The Alliance assisted 60 landowners plan best management practices for 3,977 acres. Practices have been applied by 50 of these landowners for 2,614 acres, approximately 1,300 acres of which was priority land. These practices will reduce sediment and phosphorus delivery to Rathbun Lake by an estimated 5,162 tons and 22,120 pounds per year respectively. Practices applied by landowners included terraces, debris basins, water and sediment control basins, grade stabilization structures, and grassed waterways. The Alliance continued to contact landowners in the targeted sub-watersheds to help them evaluate the need for, and benefits of, applying practices for the priority land that they own and/or farm.

The Alliance's outreach efforts included: one-on-one contacts with landowners; six landowners recognized as *Rathbun Lake Protectors* at the 2013 *Protect Rathbun Lake* meeting, bringing the total number of landowners selected as *Rathbun Lake Protectors* to 47; interviews of *Rathbun Lake Protectors* on WHO radio; installed *Rathbun Lake Protectors* signs; articles on *Rathbun Lake Protectors* in Wallaces Farmer; watershed tours for Iowa Secretary of Agriculture Bill Northey and Congressman Dave Loebsack; newsletters for Alliance members and partners; and the Alliance's Internet site at <http://www.rlwa.org/>. The Alliance received the 2013 Governor's Environmental Excellence Award and the Conservation Districts of Iowa 2013 Outstanding Watershed of the Year Award. Alliance partners also completed activities associated with the water quality monitoring program for Rathbun Lake and tributaries in the lake's watershed.

Alliance members and partners worked with the project's team of experts to plan, carry out, and assess activities. The Alliance's board and team members regularly reviewed progress in project implementation. The Alliance submitted required project progress reports and financial ledgers.

Project Name: 9005-002 Silver Creek Watershed Project
Project Sponsor: The Clayton Soil & Water Conservation District
Length of Project: January 1, 2010 to December 31, 2013

Counties included in the project area: Clayton

Total Watershed Improvement Funds awarded for this project:	\$ 365,950
Total Watershed Improvement Funds spent:	\$ 265,607
Total Watershed Improvement Funds obligated:	<u>\$ 34,500</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 65,843

Project objectives:

- Reduce sediment delivery to Silver Creek by at least 3,000 tons.
- Promote stream corridor and sinkhole protection along critical areas of the watershed, and install buffer practices on an additional 30% of Silver Creek and its tributaries.
- Develop a series of news articles, newsletters, field days, and demonstrations to increase public understanding of water quality issues and to encourage public involvement and participation in water quality programs.

Summary of Accomplishments and Water Quality Outcomes

The WIRB Grant Agreement has provided a critical source of cost share dollars for conservation practices. These funds have complemented other watershed improvement incentives that have been available to Silver Creek operators since January 1, 2007. Watershed landowners have made a major investment in conservation improvements:

Table 1: Conservation Practices Installed through the Silver Creek Watershed Project

<i>Practice</i>	<i>Completed with WIRB Assistance</i>	<i>Completed 1/1/10 to 12/31/13</i>	<i>Total Completed 1/1/07 to 12/31/13</i>
Continuous CRP Buffers (New)		5.3 Acres	34.6 Acres
CRP Buffers (Reenrolled)		30.7 Acres	30.7 Acres
Pasture Management			60 Acres
Streambank Protection			450 Feet
Terraces	48,520 Feet	94,215 Feet	198,780 Feet
Grade Stabilization Structures	1 Structure	2 Structures	4 Structures
Grassed Waterways		10,495 Feet	15,600 Feet
Animal Waste Mgmt. Systems		1 System	1 System
Water & Sediment Control Basins	1 Basin	1 Basin	1 Basin
Cover Crops		338 Acres	338 Acres

The practices installed during the term of the WIRB agreement will reduce sediment delivery to Silver Creek by an estimated 3,469 tons. New and reenrolled filter strips buffer 16,825' of Silver Creek and its tributaries. Cattle have been removed from 4,900' of the stream channel. Project activities will continue beyond 2013. A Clean Water Resource Restoration Project supports urban infiltration practices to be completed in 2014. A Section 319/WSPF/WPF Implementation Grant continues practice installations, and a Water Quality Initiative Targeted Waters Demonstration Program Grant funds cover crop and no-till incentives through 2016.

Project Name: 1223-011 South Chequest Creek Watershed
Project Sponsor: Davis County Soil and Water Conservation District
Length of Project: January 1, 2013 to April 30, 2015

Counties included in the project area: Davis County

Total Watershed Improvement Funds awarded for this project:	\$100,000.00
Total Watershed Improvement Funds spent:	\$ 28,621.86
Total Watershed Improvement Funds obligated:	<u>\$ 25,134.26</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 46,243.88

Project objectives:

- Administer the South Chequest Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Construct six grade stabilization structures on treating 1,060 acres. Construct thirty water and sediment control basins treating 120 acres. Construct 5,000 feet of terraces treating 20 acres. Install 15 acres of riparian forest buffers and filter strips treating 30 acres.
- Reduce sediment delivery to South Chequest Watershed by 2,541 tons of sediment per year.
- Conduct an information and education program to increase awareness and knowledge of South Chequest Watershed water quality issues to watershed residents, and the local community.

Summary of accomplishments and water quality outcomes

2013 was a fairly productive year for the Chequest Creek Watershed. There were several projects that were completed despite the wet spring and the government shutdown that took place in October. The project completed 4 grade stabilization structures and 1,800 feet of terraces; and obligated 3 additional grade stabilization structures and 950 feet of terraces to be completed in 2014.

We are currently awaiting the EQIP rankings to be finalized to partner with the remainder of the terrace and water and sediment control basin funding.

Along with WIRB funding South Chequest Creek is part of the Iowa Watersheds Project through the Iowa Flood Center. While we were hopeful to begin construction in the fall of 2013 the administration of this project is quite different than traditional watershed funding. With this the project is now in the process of procurement of engineering and we are hopeful to begin construction in the late summer/fall of 2014.

Project Name: 1241-018IJ Swan Lake Watershed Project
Project Sponsor: Carroll County Conservation Board
Length of Project: April 1, 2013 to June 30, 2014

Counties included in the project area: Carroll

Total Watershed Improvement Funds awarded for this project: \$39,940
Total Watershed Improvement Funds spent: \$0
Total Watershed Improvement Funds obligated: \$0
Watershed Improvement Fund unobligated balance 12/31/13: \$39,940

Project Objectives:

- Reduce sediment load entering Swan Lake
- Reduce phosphorous load from entering Swan Lake
- Increase detention time of water entering Swan Lake

Summary of Accomplishments

The Swan Lake Watershed Project has been hit with several road blocks that have slowed progress but things are moving forward. First of all, the local match component to the grant was a combination of NRCS doing the design and engineering for the project and the Conservation Board doing tree clearing and final grade and seeding once complete. In late September, the Conservation Board was informed by the NRCS that they would no longer be able to commit to their part of the local match. That left the Conservation Board in a situation of having to come up with funds to hire an engineering firm to do the survey and design work. The Conservation Board came up with some extra money out of its current budget and the Lakes Restoration division of the Iowa DNR stepped up to help with engineering costs also. It was the intention of the Conservation Board to have the project done this fall but with the change in engineering and finding funding, the project pushed into the season of frozen ground.

Currently the engineering is complete with the exception of staking which they will do right before construction begins. The joint application with the Iowa DNR and US Army Corps of Engineers has been applied for. The project has gotten approval from the Iowa DNR and we are still awaiting approval from the Army Corps of Engineers. Also we have been required to get an NPDES permit for the project. This requires a pollution prevention plan be put together by an engineer and public notice be put in the paper. This was another significant expense that was not anticipated.

Our next step is to put the project out for bid as soon as we get approval back from the US Army Corps of Engineers. The project will begin as soon as possible this spring. Local farmers in the Swan Lake Watershed have interest in planting cover crops if more funding would be available for such practices. The local NRCS office did receive funding to have terraces rebuilt and/or added in the watershed this fall.

Project Name: 1102-001 Twelve Mile Watershed Project
Project Sponsor: Creston City Water Works
Length of Project: January 1, 2012-December 31, 2014

Counties included in the project area: Union and Adair

Total Watershed Improvement Funds awarded for this project:	\$162,768.85
Total Watershed Improvement Funds spent:	\$153,268.85
Total Watershed Improvement Funds obligated:	\$ <u>0</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 9,500.00

Project objectives:

- Administer the Twelve Mile Lake Watershed Improvement Project and work with all stakeholders to ensure all objectives and activities planned are implemented as scheduled.
- Using BMPs, and involving as many local stakeholders and landowners as possible, reduce sediment delivery 50% and nutrient delivery 30-40% to the water source lake through land acquisition and practices funded by the WIRB.
- Leverage other resources to build BMPs that local groups plan to do upon completion of the WIRB project.
- Educate the public, including civic groups, homeowners, farmers, and business owners in the Twelve Mile Lake Watershed about the BMPs and establish comprehensive education and communication strategies to promote environmental awareness.
- Assist the Twelve Mile Lake Watershed Committee with inventory, evaluation, and water monitoring activities for water quality improvements on Twelve Mile Lake.

Summary of accomplishments and water quality outcomes

The main feature of the WIRB funded project was the surveying and acquisition by the project sponsor of 97.78 acres of land at \$3,100 per acre for the future installation of a sediment retention pond with a surrounding wetland. This project, to be located directly above the main arm of the water source lake, will capture sediment and nutrients from farmland and open space areas upstream, thereby improving lake water quality and reducing the rate of lake siltation. The land is now publicly owned and secured by fencing. There has been two years of water monitoring in the watershed. The results are not very conclusive since the structure has not been added yet. The IDNR plans to install the improvements in 2014. The engineering of the structure and surrounding improvements is completed. In late 2012, there was a public meeting to review the project and present plans for the future and there was a bus field tour provided by the county's soil and conservation district. To date the sponsor has spent a total of \$306,537.70 on the project, including the WIRB expended to date. The IDNR's investment on the structure is likely to be similar. In 2013, minimal work proceeded on the project, other than continued monitoring. The cause was because the IDNR could not install the structure when planned.

In 2014, there will be continued education and water monitoring along with the IDNR's activities. The final report will show the trends of water monitoring through the entire project. If the WIRB funds were more robust, more structures could be built, as more farmers are interested. While some of the structures and other BMPs will be funded by other cost-share programs, more WIRB funds would benefit the efforts the committee is doing in the watershed.

Project Name: 1231-014 Twelve Mile Creek Lake Watershed
Project Sponsor: Union Soil & Water Conservation District
Length of Project: July 1, 2013-September 30, 2015

Counties included in the project area: Adair and Union Counties

Total Watershed Improvement Funds awarded for this project:	\$ 97,350
Total Watershed Improvement Funds spent:	\$ 2,133
Total Watershed Improvement Funds obligated:	<u>\$ 15,375</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 79,842

Project objectives:

- Install 5 grade stabilization structures and 6 water & sediment control basins with WIRB funding and 3 grade stabilization structures, 6 water & sediment control basins, 10,350 feet terraces, and 4 acres grassed waterways with other funding sources to reduce sediment delivery to the lake by a total of 103.6 tons per year and phosphorus delivery by 134.7 pounds per year.
- Contact 10 landowners per year to discuss practice implementation identified by the SWCD.
- Conduct 2 Information & Education activities per year.

Summary of accomplishments and water quality outcomes

Practices:

Two grade stabilization structures, 15,700' of terraces, 5 acres of waterways, and 6.3 acres of filter strips have been installed in the watershed since July 1, 2013. The funding from these projects came from Public Owned Lakes and CRP funds. WIRB funds of \$15,373 are obligated for 1 sediment basin and 2 grade stabilization structures to be constructed this next year. Two more WIRB applications for grade stabilization structures are on file, but as one has to be sent to the Army Corps and the other is unable to do construction until late summer, these funds have not yet been obligated by the district. The practices that have been installed should reduce sediment delivery to the lake by 265 tons/yr and phosphorus delivery by 347 lb/yr.

Landowner contacts:

Six landowners have been contacted about various practices on their farms since July 2013 with 5 of them agreeing to install conservation practices. In addition, all landowners in the watershed received a mailing about the state Water Quality Initiative nutrient reduction practices.

Information & Education:

A newsletter with information about work in the watershed, prairie buffer strips, cover crops, and other nutrient management information is being sent to 85 landowners in January. An article with an update on work completed in the watershed and the impact on 12-Mile Lake will be included in the SWCD's annual report published in the local newspaper in February. This should reach at least 4500 subscribers.

Project Name: 1202-002 Upper Otter Creek Watershed Project
Project Sponsor: Fayette Soil and Water Conservation District
Length of Project: January 1, 2013-February 28, 2015

Counties included in the project area: Fayette

Total Watershed Improvement Funds awarded for this project:	\$100,000.00
Total Watershed Improvement Funds spent:	\$ 14,751.70
Total Watershed Improvement Funds obligated:	<u>\$ 4,717.50</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 80,530.80

Project objectives:

- Protect and improve water quality to establish sustainable population of trout.
- Conduct an information and education campaign to increase public interest and participation.
- Maintain the locally led water quality monitoring campaign.

Summary of accomplishments and water quality outcomes

The Upper Otter Creek Watershed Project has been in full swing. A water quality monitoring program has been set up in partnership with Upper Iowa University. The Iowa DNR has assisted with installation of temperature monitors along Otter and Glovers Creek. The Iowa Flood Center has a stream-stage sensor at the mouth of Otter Creek and will be installing 2-4 more in the upper portions of the watershed to record real-time stream state.

A conservation practice tour of the Otter Creek watershed was held on July 11 which coincided with the West Union downtown grand opening of their urban conservation project. The tour was attended by approximately 50 people. Attendees saw common BMPs that are being promoted throughout the watershed.

Conservation planning has taken place with 15 landowners covering approximately 3,500 acres. Cost estimates and designs are in process of being completed with hopes of practice installation in the spring and summer 2014. Practices included sediment basins, terraces, grassed waterways, and grade stabilization structures.

A watershed newsletter was mailed to producers in February 2013. Three newspaper articles have been published in the Fayette County Union and the Fayette SWCD Annual Report regarding the Upper Otter Creek WIRB project. Three additional newspaper articles were published in the Fayette County Union regarding the Otter Creek Iowa Flood Center Project.

If additional time was provided to this project, landowners would benefit in getting additional water quality practices implemented. Weather plays a critical role in getting construction completed timely. There are only a few construction seasons left in this project if no changes are made to this agreement.

Project Name: 9007-004 Upper Buffalo Creek Watershed
Project Sponsor: Buchanan County Soil and Water Conservation District
Length of Project: January 2010 – December 2013

Counties included in the project area: Buchanan and Fayette Counties

Total Watershed Improvement Funds awarded for this project:	\$449,569.00
Total Watershed Improvement Funds spent:	\$358,214.45
Total Watershed Improvement Funds obligated:	<u>\$ 33,087.15</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 58,267.40

Project objectives:

- Objective 1:** Administration of the watershed project (to attain goals and objectives).
- Objective 2:** Reduce sediment delivery in the watershed by 40% (8,672 tons in four years) through implementing structural and management practices.
- Objective 3:** Reduce nutrient loading (30% reduction in phosphorus). Conduct water quality monitoring and sediment delivery calculator to identify nutrient reductions.
- Objective 4:** Increase aquatic habitat through recovery of the riparian corridor, prevent stream bank erosion, and improve pre-existing in-stream habitat.
- Objective 5:** Conduct an information and education program to increase landowner awareness and knowledge. Provide technical and financial assistance for implementing structural and management practices.

Summary of accomplishments and water quality outcomes

All project reporting (bi-annual, annual, ledger, funding requests, and cover sheets) was submitted to WIRB. All progress has been reported to Buchanan and Fayette SWCD Commissioners. The final project review will be held (with sponsoring agencies) before 06/30/2014. The Project Coordinator discussed conservation/management options during field visits with 28 landowners/farm operators this past year. Outside funding sources (CRP and EQIP) were used when possible to implement practices. The Project Coordinator surveyed and designed 31 grassed waterways this past year. The Project Coordinator figured cost-share for 31 projects. There were a total of 16 projects implemented: 10 waterways (16.8 acres), 1 agri-cultural waste facility upgrade – total containment, and 5 winter cover crop plantings (452 acres). The recently completed practices have not been calculated with the new Pollutant Reduction Calculator, due to it being closed to fix bugs at the time of reporting. To date, all previous practices calculated have been reduced sediment delivery by 3,163 tons/year and reduced phosphorus loading by 4,111.9 lbs/year. Information and education outreach has been carried out through mailings, news releases, county fair booth, public watershed meeting, and one-on-one field visits. The Buchanan County SWCD released \$45,000 back to WIRB last reporting period and submitted an amendment to include cover crops as a line item. This reporting the period the Buchanan County SWCD is requesting a time extension to complete obligated projects through June 30, 2014.

Project Name: 1014-008 Walnut Creek Watershed
Project Sponsor: Montgomery & East Pottawattamie SWCDs
Length of Project: January 5th, 2011- January 31st, 2014

Counties included in the project area: Montgomery, Pottawattamie

Total Watershed Improvement Funds awarded for this project:	\$200,000.00
Total Watershed Improvement Funds spent:	\$177,019.29
Total Watershed Improvement Funds obligated:	<u>\$ 22,500.00</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 480.71

Project objectives:

- Reduce sediment delivered to Walnut Creek by 200 tons through the installation of 65,000 feet of terrace and 2 grade stabilization structures.

Summary of accomplishments and water quality outcomes

Project sponsors for the Walnut Creek Watershed are currently wrapping up what has been another successful watershed project. Effective prioritization has allowed them to achieve and exceed original goals. Currently all projects are complete with the exception of one which is currently under construction and will be completed this spring. A project extension was requested from the WIRB to carry the grant through spring to allow for completion of the project. Once complete, 66,200 feet of terraces will have been constructed along with 3 grade stabilization structures; which prevent 1,725 tons of soil from reaching Walnut Creek annually.

Additional grants are in the process of being applied for due to the overwhelming support and interest in the project.

Practices	Units Installed	Acres Treated	Annual Sediment Reduction	Annual Phosphorus Reduction
Terraces	66,200 ft	275	921 tons	1,197 lbs
Grade Stabilization Structures	3 structures	6.5	804 tons	1,045 lbs
Totals		281.5 acres	1,725 tons	2,242 lbs

Project Name: 1114-006 Walnut Creek Watershed
Project Sponsor: Montgomery & East Pottawattamie SWCD
Length of Project: January 1, 2012- February 12, 2015

Counties included in the project area: Montgomery, Pottawattamie

Total Watershed Improvement Funds awarded for this project:	\$ 335,600
Total Watershed Improvement Funds spent:	\$253,768.25
Total Watershed Improvement Funds obligated:	<u>\$ 78,560.50</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 3,271.25

Project objectives:

- Construct 100,000 feet of terraces and two structures which prevent 1,800 tons of sediment and 2,340 lbs of Phosphorous from reaching Walnut Creek.

Summary of accomplishments and water quality outcomes

Project sponsors for the Walnut Creek Watershed are close to wrapping up their third successful watershed project. Effective prioritization has allowed them to achieve and exceed original goals. Currently two grade stabilizations structure are all that remain to be constructed through the use of WIRB funds. Once complete, 117,315 feet of terraces will have been constructed along with 3 grade stabilization structures; which prevent an estimated 2,340 tons of soil from reaching Walnut Creek annually.

Additional grants are in the process of being applied for due to the overwhelming support and interest in the project.

Practices	Units Installed/ planned	Acres Treated	Annual Sediment Reduction	Annual Phosphorus Reduction
Terraces	117,315 ft.	427	828 tons	1,076 lbs
Grade Stabilization Structures	1/2 structures	1/2	176/500 tons	228/650lbs
Totals		acres	1,304/1800 tons	1,695/2,340 lbs

Project Name: 1209-006 Waterloo Creek Watershed Project
Project Sponsor: Allamakee Soil and Water Conservation District
Length of Project: October 15, 2012 – February 28, 2015

Counties included in the project area: Allamakee

Total Watershed Improvement Funds awarded for this project:	\$100,000.00
Total Watershed Improvement Funds spent:	\$ 23,317.09
Total Watershed Improvement Funds obligated:	<u>\$ 15,484.88</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 61,198.03

Project objectives:

- Administer the Waterloo Creek Watershed Improvement Project to ensure all objectives and activities planned are implemented.
- Expand upon current partnering and develop a formal working relationship amid technical staff in both states to allow consistent, focused BMP implementation.
- Identify specific locations for BMP implementation.
- Install 10,000 feet of new terraces, 12 grade stabilization structures, 2500 feet of streambank, and pasture management practices to reduce sediment and nutrient delivery to the stream.

Summary of accomplishments and water quality outcomes

Public outreach continues throughout the watershed on a regular basis. Newsletters were mailed to landowners in March, April, and August. Press releases were published in local newspapers in March, August, and November. Letters were sent to landowners in June, July, and December. The project sponsor's website is updated often. On-site visits are conducted regularly to evaluate site-specific BMPs and discuss funding opportunities.

A part-time employee dedicated entirely to the watershed has allowed for a working relationship to become established amid technical staff in both states. This individual has allowed for a consistent, focused approach to BMP implementation.

In 2013, one grade stabilization structure and 2250 feet of terraces were constructed. One sediment control structure and 1700 feet of terraces were also planned for 2013 construction, but have been pushed back to spring 2014 construction due to the early freeze. Also planned for construction in 2014 at this time are one grade stabilization structure, 3600 feet of terraces, a waterway, and a diversion. On a cumulative degree, sediment loading has been reduced by about 98 tons per year and phosphorus loading by about 127 lbs per year in the watershed.

Due to the recent receipt of a separate technical assistance grant, salary funds from the WIRB have been transferred to additional practices of streambank stabilization and pasture management. There has been landowner interest in both of these practices. If an additional 10 months (through December 2015) were provided for this project, more practices would be able to be implemented. This was initially a two-year project, and the additional BMP funds would be better utilized if two more construction seasons were available.

Project Name: 1245-021IJ West Tarkio Watershed
Project Sponsor: Page County Soil & Water Conservation District
Length of Project: July 1, 2013 to June 15, 2014

Counties included in the project area: Page

Total Watershed Improvement Funds awarded for this project:	\$52,500.00
Total Watershed Improvement Funds spent:	\$10,274.29
Total Watershed Improvement Funds obligated:	<u>\$37,500.00</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 4,725.71

Project objectives:

- Install 7,500 ft of terrace
- Install 2 water sediment control basins
- Calculate run off saving of each project using the Pollutant Reduction Calculator

Summary of accomplishments and water quality outcomes

To date we have completed 2 water quality projects. One of those projects consisting of 3,666 ft of terraces and 1868 yds of basin of which the total job cost was over \$28,000.00. The landowner received \$10,000.00 c/s and paid for the rest out of pocket. Should he have got more funding we could have continued on to the other drainage area thereby dramatically improving the water quality coming off of his farm. We have 3 jobs that have been started however due to inclement weather further construction has been halted until suitable construction conditions allow.

With late harvest across the state we were unable to complete as many projects as anticipated and will be concluding them this spring when conditions allow. However with the projects that have been completed we were able to significantly reduce the soil loss there by trapping the sediment in the channels of the practices therefore limiting run off downstream.

Should there have been more resources available we would have been able to offer more c/s to more landowners looking to improve their land and reduce the amount of soil loss on their farms. As the project builds awareness we are receiving more applications for funding and more inquires about the project guidelines.

Project Name: 1012-007 Yellow River Headwaters
Project Sponsor: Winneshiek SWCD
Length of Project: December 15, 2010 - June, 2014

Counties included in the project area: Winneshiek & Allamakee

Total Watershed Improvement Funds awarded for this project:	\$200,000.00
Total Watershed Improvement Funds spent:	\$ 89,764.00
Total Watershed Improvement Funds obligated:	<u>\$ 83,000.00</u>
Watershed Improvement Fund unobligated balance as of 12/31/2013:	\$ 27,236.00

Project objectives:

Goal 1: Decrease sediment delivery to the YRHW by 50% over the next 4 years.

- **Objective I:** Work with landowners in targeted areas of the YRHW to implement the most effective BMPs to reduce sediment delivery to the stream, thus reducing turbidity

Goal 2: Decrease bacteria loading to the YRHW by 35% over the life of the project.

- **Objective 1:** Work with landowners in the YRHW to implement BMPs to reduce bacteria run-off from open feedlots
- **Objective II:** Work with landowners in the YRHW to change grazing practices to reduce bacteria delivery.
- **Objective III:** Work with landowners in the YRHW to update/improve septic system function to reduce bacteria loading.

Goal 3: Reduce livestock access to the stream by 75% over the life of the project.

- **Objective 1:** Work with landowners in the YRHW to restrict livestock access to the stream.

Goal 4: Increase the culture of conservation among landowners in the YRHW.

- **Objective 1:** Highlight producer's contributions and investment into project participation and promotion of conservation participation.

Summary of accomplishments and water quality outcomes

2013 had many revelations about the watershed and the producers' interest in placement of best management practices. We have seen extraordinary support from most of our producers again this past year which is supported by the over 6,000 tons of sediment loading reductions that have been brought by construction of BMP's since the inception of the watershed project. Unexpected twists to the project this year were experienced with unseasonably late planting season due to snow and wetness, plus by compounding the government shutdown hampered implementation of scheduled practices in our projects timeline. Contrary to these setbacks we were able to complete 17 BMP's this past year. The project continues to be funded with gracious investment from WIRB, WSPF, 319, WPF and EQIP funds to allow more landowners the opportunity to obtain cost-share towards the future commitment of conservation on their farms. We collected 242 water samples with over 2,000 defined data points from the watershed to help analyze tributaries the feature hot zones of high nutrient loading that are affecting the water quality of the priority watershed. This catalog of information steers us towards the greatest reductions of nutrients and sediment loading. Of the 149,972 feet of stream that had livestock access at the projects inception now 70,995 feet of that has entered into livestock exclusion programs facilitated by the watershed project.

Fortunately this project was selected for another funding for WIRB funds. Since our partners have been able to specialize funds towards known impairments, the project can now focus more on management practices that we haven't had funds to address nutrient, bacterial and sediment issues historically. This additional funding is encouraging and though we are pleased by our past successes; we will continue to diligently work with our producers to ensure the ecological health and bounty of the Yellow River Watershed for the future.